



"Until They Are Home"

#### THE JPAC MISSION



The Joint POW/MIA Accounting Command's mission is to conduct global search, recovery and laboratory operations to identify unaccounted-for Americans from past conflicts in order to support the Department of Defense's personnel accounting efforts.

Employing nearly 500 joint military and civilian personnel, JPAC spans the globe in search of missing Americans.

The laboratory portion of JPAC, referred to as the Central Identification Laboratory, is the largest forensic anthropology laboratory in the world. The command maintains three permanent overseas detachments to assist with command and control, logistics and in-country support during investigation and recovery operations. Detachment One is located in Bangkok, Thailand; Detachment Two in Hanoi, Vietnam; and Detachment Three in Vientiane, Laos. Detachment Four, located at Joint Base Pearl Harbor-Hickam, Hawaii, is responsible for recovery team personnel when they are not deployed.

Personnel from JPAC, along with other U.S. and foreign specialists, research, investigate, recover and identify remains of Americans unaccounted-for from World War II, the Korean War, the Vietnam War and the Cold War.

The accounting process is organized into the following areas: research and analysis; investigation and recovery, and identifications.

#### **RESEARCH & ANALYSIS**

The search for unaccounted-for Americans starts with in-depth research by JPAC historians and analysts. These experts gather information from records, archives, interviews and other sources.

Researchers take this information and create a "loss incident case file" for each unaccounted-for individual. This file includes historical background, military medical and personnel records, unit histories, official correspondence, maps, photographs and other evidence. This groundwork lays the foundation to locate possible sites where missing Americans may be located.

## INVESTIGATION & RECOVERY OPERATIONS

#### INVESTIGATION

After evidence and information is gathered, JPAC sends out an investigative team to potential sites. Each team consists of four to nine people including a team leader, analyst, linguist, communication technician and medic. In some instances, an anthropologist, explosive ordnance disposal technician, forensic photographer and life support technician augment the team.

Most importantly, investigative teams help determine if and when JPAC should send a recovery team to excavate a potential site.

The analysis and investigation section also provides historical analysis to help with the identification of remains. At any given time, there are more than 1,000 active case files under investigation.

#### EXCAVATION

Once the decision has been made to excavate a site, a recovery team is activated. The command has 18 recovery teams consisting of 10 to 14 people including a forensic anthropologist, team leader and sergeant, linguist, medic, life support technician, communications technician, forensic photographer, explosive ordnance disposal technician and mortuary affairs specialists. Standard recovery missions last 35 to 60 days depending on the location and recovery methods used on site.

Team members have to be in top physical condition to reach excavation sites, which are often in very remote places. Team members routinely walk through dense jungles, hike mountains and glaciers, and rappel down cliffs to reach a site. Each team travels with up to 10,000 pounds in survival and excavation equipment. Recovery sites can be as small as a few meters for individual burials to areas exceeding the size of a football field for aircraft crashes.

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Recovery teams use standard field archaeology methods in the excavation as directed by the on-site anthropologist. At a recovery site, the anthropologist, also referred to as the recovery leader, directs the excavation much like a detective oversees a crime scene. Each mission is unique, but there are certain processes each recovery has in common.

The first step is for the anthropologist to define the site or determine the site perimeter. Once a site perimeter has been defined, the anthropologist establishes a grid system and sections the site with stakes and string.

Each section is then excavated one grid at a time. Every inch of soil that comes out of the site is screened for any potential remains, life support equipment or material evidence. To help with what can be a massive soil removal effort, JPAC may hire anywhere from a few to more than 100 local workers.

Initial analysis occurs at the site, and the recovered evidence is brought back to the lab for further examination.

#### ARRIVAL CEREMONY

Once the recovery effort is completed, the team returns to Hawaii. All remains and artifacts found during the recovery operation are transported to JPAC's Central Identification Laboratory for analysis.

In honor of the sacrifice made by those individuals whose remains were recovered dur

ing a recovery mission, JPAC holds an arrival ceremony with a joint service honor guard and senior officers from each service. Veterans, community members and local active-duty military often attend the ceremonies to pay their respects as the remains are transported to the lab for analysis.

#### **IDENTIFICATION**

Upon arrival at the lab, all remains and artifacts recovered from a site are signed over to an evidence coordinator and stored in a secure area. Forensic anthropologists are responsible for the analysis of human remains and material evidence, such as military uniforms, personal effects and identification tags.

Forensic anthropologists first examine all recovered skeletal remains in order to produce a "biological profile." This profile includes sex, race, age at death and stature. Anthropologists may also analyze trauma caused at or near the time of death and pathological conditions of bone such as arthritis or previous healed breaks.

The forensic anthropologist assigned the case in the laboratory is not the individual who completed the recovery in the field. This entire procedure is carried out in the "blind," meaning the anthropologist does not know the suspected identity of the individual under analysis. However, scientists are provided specific details that are required to select the appropriate scientific techniques (i.e., the approximate area of the loss incident.)

The blind analysis is completed in order to prevent any subconscious bias from influencing the scientist's analysis.

Scientists use a variety of techniques to establish the identification of missing Americans, including analysis of skeletal and dental remains, sampling mitochondrial DNA, and analyzing material evidence, personal effects and life support equipment. The JPAC scientific director evaluates these overlapping lines of evidence in an effort to identify the remains.

#### CENTRAL IDENTIFICATION LAB

The laboratory is the most scientifically diverse skeletal identification laboratory in the world and is staffed by more than 60 forensic anthropologists, archaeologists and odontologists (dentists).

In 2008, the CIL became the second federal laboratory to pass the American Society of Crime Laboratory Directors-Laboratory Accreditation Board, International Standards Program. The command mantains the highest level of scientific competence and integrity possible to ensure the ethical standing is beyond reproach.

#### FORENSIC ODONTOLOGY

Dental remains are extremely important to the identification process. They offer the best means of positive identification, they are durable and may contain surviving mitochondrial DNA. An individual's dental records are often the best way to identify remains because they are durable, have characteristics unique to each person and may contain surviving mtDNA.



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Ideally, JPAC's forensic odontologists will have antemortem (before death) X-rays to use for comparison, but even handwritten charts and treatment notes can be critical to the identification process.

#### MITOCHONDRIAL DNA

Unlike nuclear DNA, which is unique to that person, mtDNA is passed directly from a person's mother. Generally, all persons of the same maternal line have the same mtDNA sequences. Since these sequences are rare but not unique within the general population, they cannot stand alone as evidence for identification.

The lab uses mtDNA in about three-quarters of its cases. Samples taken from bones and teeth are analyzed at the Armed Forces DNA Identification Laboratory, to determine the genetic sequence. This sequence is compared with sequences from family reference samples provided by living individuals who are maternally related to unidentified Americans. These family reference samples are collected as needed by the casualty and mortuary offices.

#### CLOSURE

While JPAC identifies an American about every 2.5 days, the recovery and identification process may take years. Approximately 75-100 individuals are identified per year. Once a case is complete, the information is transferred to the appropriate service mortuary affairs office who personally notifies the family of the identification.

#### FORENSIC SCIENCE ACADEMY

In 2008, JPAC opened the Forensic Science Academy, an advanced forensic anthropology program consisting of five courses taught under the auspices of the Department of Defense. Their mission is to serve as a scientific training center of excellence for forensic anthropology, archaeology and odontology.

In the lab, Fellows receive training in anthropology, archaeology and odontology, and train in a variety of techniques and identification methods in a unique and technologically advanced laboratory. They are assigned skeletal cases and are required to submit forensic anthropology reports detailing their findings.

In the field, Fellows assist in an archaelogical excavation during a 35-day mission to Laos or Vietnam. Fellows also study at Khon Kaen University, Thailand, honing their skills in human variation, bone disease and innovative identification methods.



# JOINT POW/MIA ACCOUNTING COMMAND

#### 2013 13-Month Calendar

Commander Maj. Gen. Kelly K. McKeague

U.S. Air Force

Deputy Commander Col. Alan Thoma

**U.S. Marine Corps** 

Command Senior Sgt. Maj. DaNang McKay

Enlisted Leader U.S. Army

Deputy to the Cmdr Mr. Johnie Webb for External Relations and Legislative Affairs

Deputy to the Cmdr Dr. Thomas Holland for Central Identification Laboratory Operations

#### JPAC Public Affairs and Design Staff

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U.S. Air Force

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U.S. Air Force

DoD Photos JPAC Forensic Imaging

Center

#### Follow Our Mission

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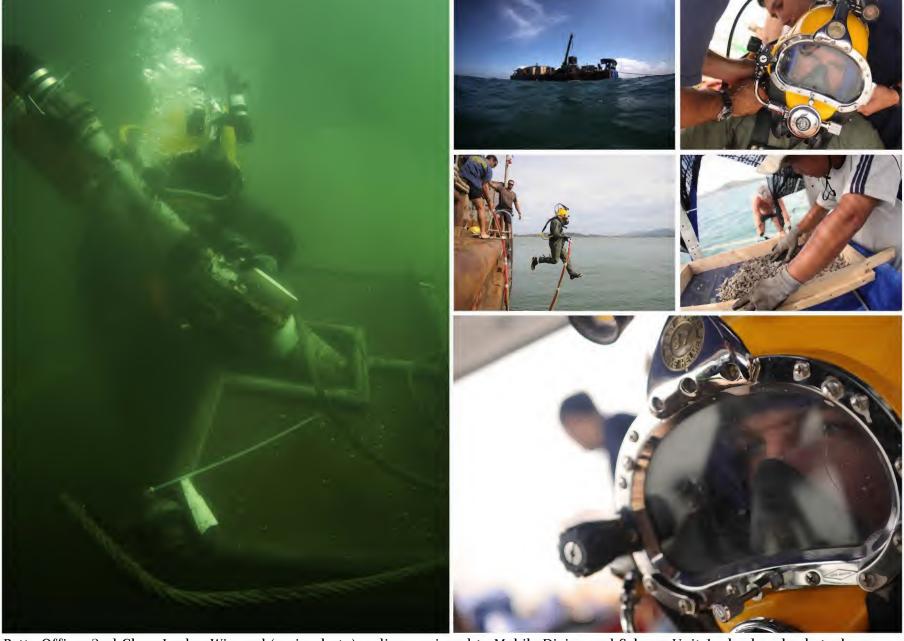
YouTube www.youtube.com/jpacpao
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The Central Identification Laboratory is the largest and most diverse skeletal identification laboratory in the world, staffed by more than 60 anthropologists, archaeologists and forensic odontologists. Scientists from JPAC use a variety of techniques to establish the identification of unaccounted-for individuals, including analysis of skeletal remains and sampling mitochondrial DNA.



January 2013



Petty Officer 2nd Class Jordan Wingard (main photo), a diver assigned to Mobile Diving and Salvage Unit 1, checks a basket where sediment from the ocean floor is collected during an underwater recovery operation in the Nghe An province, off the northern coast of Vietnam. The team excavated an underwater aircraft crash site searching for Americans unaccounted-for from the Vietnam War.



February 2013



Dr. Thomas Holland (main photo), JPAC Deputy to the Commander for Central Identification Lab Operations, addresses family members during an open forum regarding unaccounted-for service members from the Vietnam War at the Defense Prisoner of War Missing Personnel Office's annual government briefing in Crystal City, Va.

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March 2013



Every April JPAC conducts a remembrance ceremony on Heroes' Green at Joint Base Pearl Harbor-Hickam, Hawaii to honor the service and sacrifice of 16 team members, American and Vietnamese, who perished as the result of a helicopter crash on April 7, 2001. The JPAC and Vietnamese personnel were part of an advance team deployed during the 65th Joint Field Activity in Vietnam.



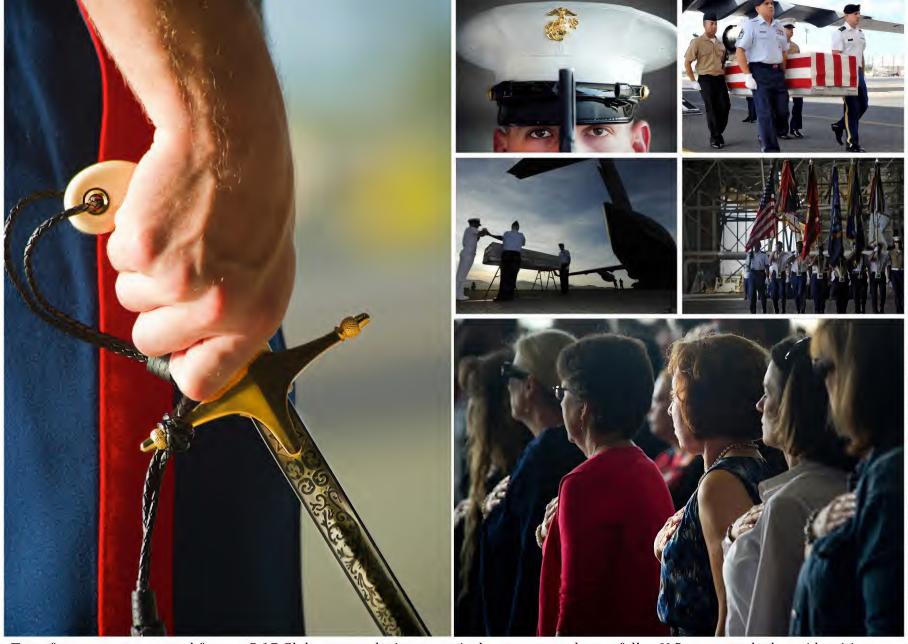
April 2013



Remains of Korean War unknowns are honored during a repatriation ceremony at Joint Base Pearl Harbor-Hickam, Hawaii. The remains were determined to not be U.S. service men by JPAC's Central Identification Laboratory. A United Nations flag-draped casket was transferred from JPAC custody to the Republic of Korea's Ministry of National Defense for Killed in Action Recovery and Identification's custody for further analysis.



May 2013



Transfer cases are escorted from a C-17 Globemaster during an arrival ceremony to honor fallen U.S. personnel whose identities remain unknown at Joint Base Pearl Harbor-Hickam, Hawaii. The first transfer case represented individuals unaccounted-for from World War II and was recovered from Papua New Guinea. The final three transfer cases were recovered from Vietnam, Laos and Cambodia and represented Vietnam War losses.

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June 2013



Local nationals and JPAC personnel conduct a recovery excavation high in the Finisterre mountain range of the Madang Province, Papua New Guinea. A ten-person team deployed out of Joint Base Pearl Harbor-Hickam, Hawaii, for more than 45 days searching for evidence of Americans lost during World War II.



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July 2013



Maj. Gen. Stephen Tom, JPAC Commander from 2010-2012 (main photo), addresses the audience at the Veterans of Foreign Wars (VFW) National Convention in Reno, Nev. Personnel from JPAC attend community relations events throughout the year to include veterans organization conventions, POW/MIA awareness rallies and the like, to educate the public at large about JPAC's mission.

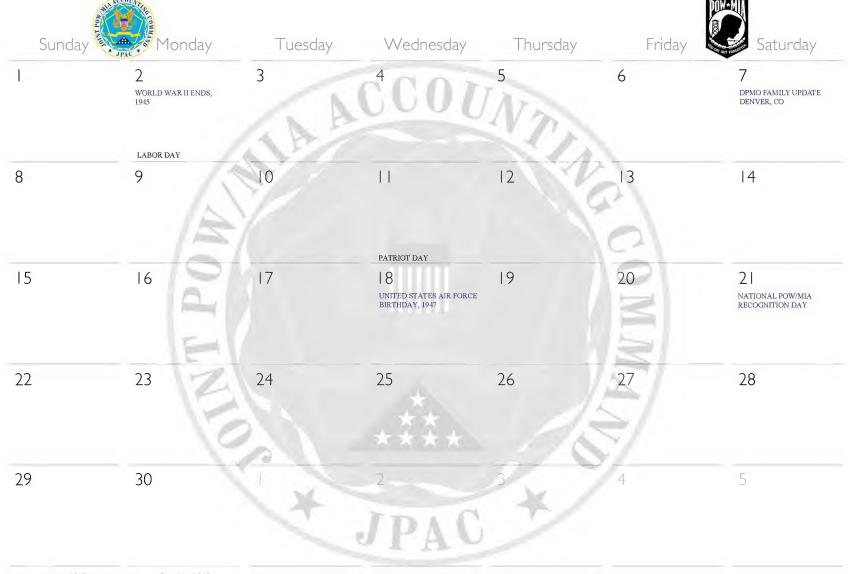


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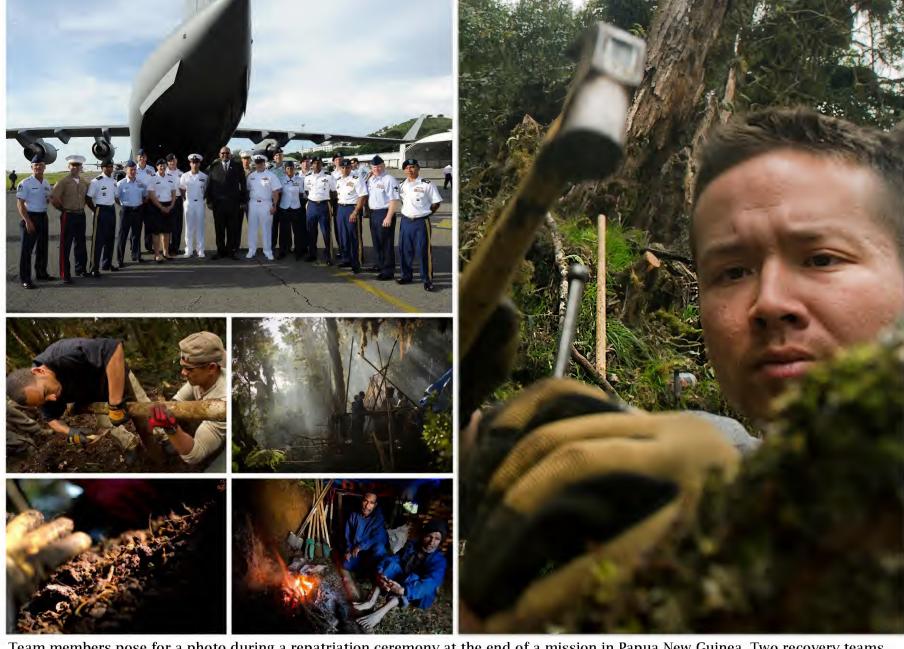
August 2013



U.S. Army Sgt. 1st Class Borys Tsybulin (main photo), an explosive ordnance technician augmented to a JPAC team, searches a river bed for possible unexploded ordnance or evidence of Americans unaccounted-for from the Vietnam War in Xepon Province, Lao.



September 2013



Team members pose for a photo during a repatriation ceremony at the end of a mission in Papua New Guinea. Two recovery teams and one investigation team searched for more than 45 days for U.S. service members who remain unaccounted-for from World War II.



October 2013



A JPAC specially trained underwater archaeological recovery team searches for Americans who remain unaccounted-for from World War II in Longue-Pointe-De-Mingan, Quebec. A 50-person recovery team comprised of specialists from JPAC, civilian mariners from the USNS Grapple (T-ARS 53), and divers from Mobile Diving and Salvage Unit Two, conducted underwater excavations searching for five Americans lost when their OA-10 aircraft crashed in November 1942.



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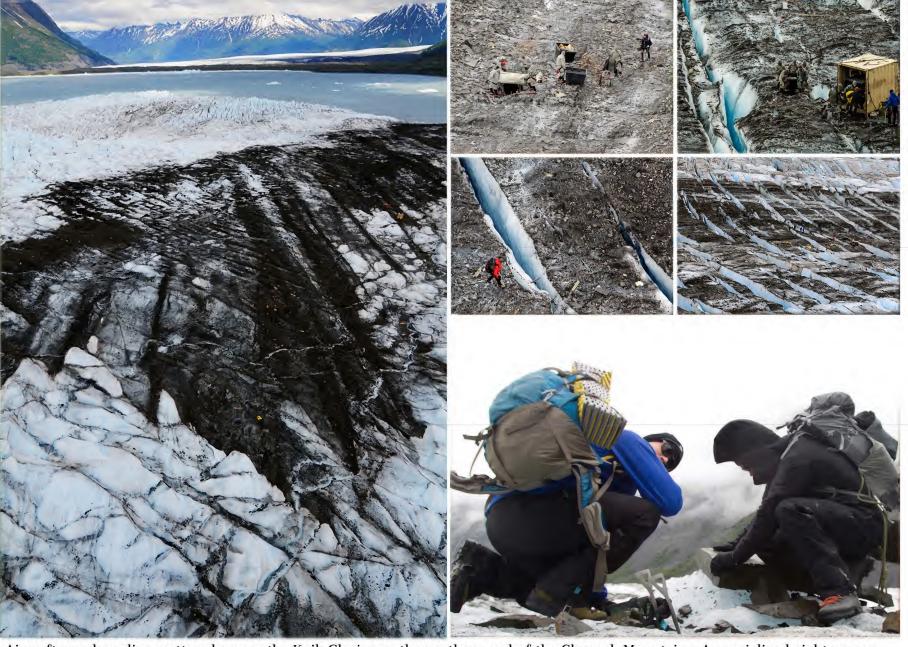
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November 2013



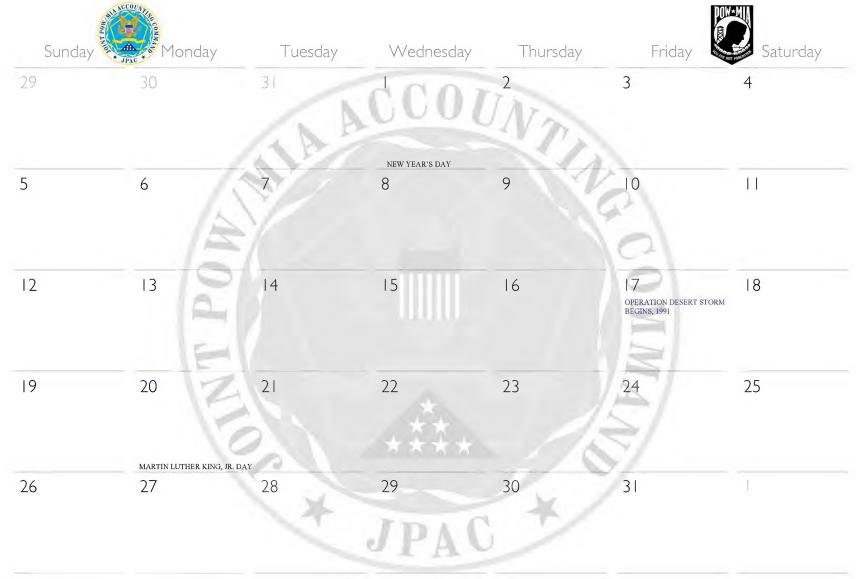
Aircraft wreckage lies scattered across the Knik Glacier on the northern end of the Chugach Mountains. A specialized eight-person recovery team, comprised of personnel from JPAC and the Northern Warfare Training Center, searched for aircraft wreckage, remains, and personal effects while conducting recovery operations at the aircraft crash site near Anchorage, Alaska.



December 2013



Joint POW/MIA Accounting Command recovery team members and Laotion workers dig and remove dirt from a two meter deep hole. Three teams excavated three aircraft crash sites in Khammouan, Xekong and Savannakhet provinces in search of 11 Americans who remain unaccounted-for from the Vietnam War.



January 2014

# JOINT POW/MIA ACCOUNTING COMMAND ACCOUNTS 2013 CALENDAR

### "UNTIL THEY ARE FLOME"

